

DERWENT-ACC-NO: 1999-308175
DERWENT-WEEK: 199929
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TITLE: Liquid injection sealing under-fill material for semiconductors - comprises an epoxy resin which is liquid at a normal temperature, cyanate esters, bisphenol compound, an imidazole, a metal complex catalyst and spherical inorganic filler

PATENT-ASSIGNEE:

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|--------------------------|------|
| ASSIGNEE | CODE |
| SUMITOMO BAKELITE CO LTD | SUMB |

PRIORITY-DATA: 1997JP-0276757 (October 9, 1997)

PATENT-FAMILY:

| PUB-NO | PUB-DATE | LANGUAGE | PAGES | MAIN-IPC |
|----------------------|----------------|----------|-------|------------|
| <u>JP 11106481 A</u> | April 20, 1999 | | 006 | C08G059/62 |

APPLICATION-DATA:

| PUB-NO | APPL-DATE | APPL-NO | DESCRIPTOR |
|-------------|-----------------|----------------|------------|
| JP11106481A | October 9, 1997 | 1997JP-0276757 | |

INT-CL (IPC): C08 G 59/62; C08 G 59/68; C08 K 3/00; C08 L 63/00; H01 L 23/29; H01 L 23/31

ABSTRACTED-PUB-NO: JP11106481A

BASIC-ABSTRACT:

A liquid injection sealing under-fill material, comprising: (A) 100 pts.wt. of an epoxy resin which is liquid at a normal temperature; (B) 100 - 150 pts.wt. of a cyanate ester of formula (I) (pts.wt.) and a cyanate ester of formula (II) (b pts.wt.) (total of a + b is 100 and 0.15 = or < a/(a+b) = or < 0.5); (C) 5 - 30 pts.wt. of a bisphenol compound of formula (III); (D) 0.3 - 2 pts.wt. of an imidazole; (E) a metal complex catalyst and (F) spherical inorganic filler. In formulae, R₁, R₂ = H or alkyl of 1-10C (at least either R₁ or R₂ is an alkyl); R₃ = alkylene of 2-10C.

USE - The liquid injection sealing under-fill material is useful for liquid injection sealing of semiconductor devices.

ADVANTAGE - The liquid injection sealing under-fill material used for a gap between a flip chip and a printed circuit board will provide reliable flip chip mounting which can pass IR reflow test after JEDEC level 3 moisture uptake treatment.

CHOSEN-DRAWING: Dwg.0/0

TITLE-TERMS: LIQUID INJECTION SEAL FILL MATERIAL SEMICONDUCTOR COMPRISE EPOXY RESIN LIQUID NORMAL TEMPERATURE CYANATE BISPHENOL COMPOUND IMIDAZOLE METAL COMPLEX CATALYST SPHERE INORGANIC FILL

DERWENT-CLASS: A21 A85 L03 U11

CPI-CODES: A02-A00A; A04-D; A05-A01E2; A08-C09; A08-D03; A08-R01; A10-B01; A11-B12A;